 States, 2016.

|  | Race/Ethnicity |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | White only, nonHispanic ( $\mathrm{n}=12,883$ ) | Black only, nonHispanic ( $\mathrm{n}=1,990$ ) | Hispanic $(n=3,223)$ | American Indian/Alaska Native only, nonHispanic ( $\mathrm{n}=300$ ) | Asian, non-Hispanic $(\mathrm{n}=862)$ | Multiracial, nonHispanic ( $\mathrm{n}=1,127$ ) |
| Vaccines | \% (95\% CI) ${ }^{\text {8 }}$ | \% (95\% CI) | \% (95\% CI) | \% (95\% CI) | \% (95\% CI) | \% (95\% CI) |
| Tdap ${ }^{\text {I }}$ ¹ dose | 89.3 ( $\pm 0.9)$ | 89.6 ( $\pm 2.0)$ | 85.4 ( $\pm 2.6)^{\star *}$ | 89.7 ( $\pm 5.2$ ) | 83.7 ( $\pm 7.2$ ) | 86.2 ( $\pm 4.6)$ |
| MenACWY ${ }^{\dagger \dagger} \geq 1$ dose | 81.2 ( $\pm 1.2)$ | 85.5 ( $\pm 2.2)^{* *}$ | 83.8 ( $\pm 2.7)$ | 78.4 ( $\pm 7.3$ ) | 82.7 ( $\pm 6.8)$ | 76.8 ( $\pm 4.8$ ) |
| MenACWY $\geq 2$ doses (age 17 years only) | 38.7 ( $\pm 3.3)$ | 44.6 ( $\pm 9.0)$ | 37.0 ( $\pm 8.3)$ | NA | 44.6 ( $\pm 12.3)$ | 36.8 ( $\pm 12.4)$ |
| HPV ${ }^{55}$ vaccine coverage by doses |  |  |  |  |  |  |
| All Adolescents |  |  |  |  |  |  |
| $\geq 1$ dose | $54.7( \pm 1.4)$ | $65.9( \pm 3.3)^{* *}$ | $69.8( \pm 3.1)^{\star *}$ | 62.3 ( $\pm 9.5)$ | 62.5 ( $\pm 6.6)^{\star *}$ | 60.7 ( $\pm 5.4)^{\star *}$ |
| $\geq 2$ doses | 45.2 ( $\pm 1.5)$ | 51.6 ( $\pm 3.5)^{* *}$ | 56.8 ( $\pm 3.5)^{\star *}$ | 46.6 ( $\pm 9.3)$ | $51.7( \pm 6.7)$ | 47.5 ( $\pm 5.4)$ |
| $\geq 3$ doses | $34.8( \pm 1.4)$ | 37.0 ( $\pm 3.4)$ | 41.5 ( $\pm 3.5)^{\star *}$ | 32.4 ( $\pm 8.6)$ | 44.4 ( $\pm 6.7)^{\star *}$ | 36.8 ( $\pm 5.1$ ) |
| HPV UTDIT | 39.6 ( $\pm 1.4)$ | 46.0 ( $\pm 3.5)^{\star *}$ | $49.9( \pm 3.5)^{\star *}$ | 42.5 ( $\pm 9.1$ ) | 47.2 ( $\pm 6.7)^{\star *}$ | 42.2 ( $\pm 5.3)$ |
| FEMALES |  |  |  |  |  |  |
| $\geq 1$ dose | 60.0 ( $\pm 2.0)$ | 70.0 ( $\pm 4.9)^{\text {** }}$ | $71.8( \pm 4.5)^{* *}$ | 68.3 ( $\pm 12.2)$ | 71.9 ( $\pm 7.0)^{* *}$ | 65.1 ( $\pm 6.7$ ) |
| $\geq 2$ doses | 51.1 ( $\pm 2.1$ ) | 56.0 ( $\pm 5.2)$ | $61.2( \pm 5.1)^{* *}$ | 57.1 ( $\pm 13.2)$ | 62.6 ( $\pm 8.1)^{* *}$ | 56.4 ( $\pm 6.8)$ |
| $\geq 3$ doses | 40.4 ( $\pm 2.1$ ) | 43.3 ( $\pm 5.2)$ | 45.9 ( $\pm 5.2$ ) | 46.9 ( $\pm 13.4)$ | 55.0 ( $\pm 8.9)^{\text {** }}$ | 44.3 ( $\pm 6.8)$ |
| HPV UTD | $45.7( \pm 2.1)$ | 51.2 ( $\pm 5.2)$ | $55.3( \pm 5.3)^{\star *}$ | 54.1 ( $\pm 13.2)$ | 58.2 ( $\pm 8.6)^{\star *}$ | 49.6 ( $\pm 6.8)$ |
| MALES |  |  |  |  |  |  |
| $\geq 1$ dose | 49.7 ( $\pm 2.0$ ) | $61.4( \pm 4.4)^{* *}$ | $67.8( \pm 4.1)^{\star *}$ | 56.0 ( $\pm 13.8)$ | 53.5 ( $\pm 9.8)$ | 56.6 ( $\pm 8.4$ ) |
| $\geq 2$ doses | 39.7 ( $\pm 2.0)$ | 46.8 ( $\pm 4.5)^{* *}$ | $52.5( \pm 4.7)^{* *}$ | 35.6 ( $\pm 11.3)$ | 41.2 ( $\pm 8.9$ ) | $39.5( \pm 7.8)$ |
| $\geq 3$ doses | 29.6 ( $\pm 1.8)$ | 30.1 ( $\pm 4.0)$ | $37.2( \pm 4.6)^{\star *}$ | 17.0 ( $\pm 7.0)^{* *}$ | 34.3 ( $\pm 8.4)$ | 30.0 ( $\pm 7.1$ ) |
| HPV UTD | 34.0 ( $\pm 1.9)$ | 40.5 ( $\pm 4.4)^{\star *}$ | 44.6 ( $\pm 4.7)^{\star *}$ | $30.3( \pm 10.3)$ | 36.6 ( $\pm 8.6)$ | $35.4( \pm 7.6)$ |
| $\geq 2$ MMR vaccine doses | 91.8 ( $\pm 0.8)$ | 91.6 ( $\pm 1.7)$ | 88.9 ( $\pm 1.9)^{* *}$ | 90.5 ( $\pm 5.7)$ | 90.3 ( $\pm 5.8)$ | 89.1 ( $\pm 4.4)$ |
| $\geq 3$ Hepatitis B | 92.4 ( $\pm 0.8)$ | 92.3 ( $\pm 1.6)$ | 89.2 ( $\pm 1.9)^{\star *}$ | 94.4 ( $\pm 4.0$ ) | 88.4 ( $\pm 6.1$ ) | 90.8 ( $\pm 3.3)$ |
| Varicella |  |  |  |  |  |  |
| History of varicella*** | 15.7 ( $\pm 1.1$ ) | 11.2 ( $\pm 2.1)$ | 15.9 ( $\pm 2.4)$ | 19.6 ( $\pm 6.9)$ | 15.5 ( $\pm 4.3)$ | 15.5 ( $\pm 3.8)$ |
| Among adolescents with no history of varicella: |  |  |  |  |  |  |
| $\geq 1$ dose vaccine | 95.5 ( $\pm 0.6)$ | 96.1 ( $\pm 1.2)$ | 93.0 ( $\pm 2.2)^{\star *}$ | 93.9 ( $\pm 6.1$ ) | 94.0 ( $\pm 6.6)$ | 96.3 ( $\pm 1.7)$ |
| $\geq 2$ doses vaccine | 86.1 ( $\pm 1.1$ ) | 87.0 ( $\pm 2.7)$ | $84.2( \pm 2.8)$ | 79.5 ( $\pm 8.9)$ | 84.4 ( $\pm 7.2)$ | $84.8( \pm 4.3)$ |

 = measles, mumps, and rubella; NA = not available (estimate not reported because unweighted sample size for the denominator was $<30$ or ( $95 \% \mathrm{Cl}$ half width / estimate) $>0.6$ )

* Adolescents ( $\mathrm{N}=20,475$ ) in the 2016 NIS-Teen were born January 1998 through February 2004.

 because of small sample sizes $(n=90)$.
 estimate. Estimates with $95 \% \mathrm{CI}$ half-widths $>10$ might not be reliable.
"Includes percentages receiving Tdap vaccine at or after age 10 years.
** Statistically significant difference ( $\mathrm{p}<0.05$ ) in estimated vaccination coverage by race/ethnicity; referent group was white, non-Hispanic adolescents.
${ }^{\dagger \dagger}$ Includes percentages receiving MenACWY and meningococcal-unknown type vaccine.
 9,661 ) and males only ( $\mathrm{N}=10,814$ ).
 ***By parent/guardian report or provider records.

Supplementary Table 2. Distribution of Vaccine Providers for adolescents aged 13-17 years by MSA* and provider facility type ${ }^{\dagger}$-- National Immunization Survey-Teen (NIS-Teen), United States, 2016

| Supplentary Table |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total |  | ALL PUBLIC FACILITIES |  | ALL HOSPITAL FACILITIES |  | ALL PRIVATE FACILITIES |  | ALL <br> SCHOOLIOTHER |  | MIXED |  | ALL MILITARY FACILITIES I ALL WIC CLINIC FACILITIES / ALL PHARMACIES |  |
|  | N | \% (95\%. С...) | N | \% (95\%. С...) | N | \% (95\%. С...) | N | \% (95\%. С...) | N | \% (95\%. С...) | N | \% (95\%. C.I.) | N | \% (95\%. С...) |
| Total | 20,475 | 100 | 2,925 | 14.5 (13.6-15.5) | 2,426 | 10.1 (9.4-10.9) | 10,146 | 53.0 (51.7-54.3) | 328 | 2.0 (1.6-2.5) | 4,209 | 19.0 (18.1-20.0) | 289 | 1.3 (1.1-1.6) |
| MSA, Central City | 7,979 | 40.1 (38.9-41.4) | 936 | 14.4 (12.8-16.0) | 1,064 | 11.6 (10.3-13.0) | 4,196 | 52.9 (50.7-55.0) | 139 | 2.1 (1.5-3.1) | 1,437 | 17.7 (16.1-19.4) | 140 | 1.4 (1.0-1.9) |
| MSA, Non-Central City | 8,248 | 46.9 (45.6-48.1) | 740 | 10.3 (9.1-11.6) | 849 | 9.0 (8.0-10.1) | 4,883 | 60.2 (58.4-62.1) | 113 | 1.8 (1.2-2.5) | 1,496 | 17.3 (16.0-18.8) | 125 | 1.4 (1.0-1.9) |
| Non-MSA | 4,248 | 13.0 (12.4-13.6) | 1,249 | 30.4 (28.1-32.9) | 513 | 9.9 (8.5-11.6) | 1,067 | 27.3 (25.0-29.7) | 76 | 2.2 (1.3-3.5) | 1,276 | 29.5 (27.2-31.9) | NA | (.-.) |


 Census Bureau (https://www.census.gov/geo/reference/gtc/gtc cbsa.html). Non-MSA areas include urban populations not located within an MSA as well as completely rural areas


 program, and all pharmacies. Facility type is missing for $\mathrm{n}=152$ respondents.
 Teen (NIS-Teen), United States, 2013-2016.

|  | NIS-TEEN 2013 ( $\mathrm{n}=18,264$ ) | NIS-TEEN 2014 ( $\mathrm{n}=20,827$ ) | NIS-TEEN 2015 ( $\mathrm{n}=21,875$ ) | NIS-TEEN 2016 ( $\mathrm{n}=20,475$ ) | MOST CURRENT 4 YEARS ANNUAL AVERAGE INCREASE ${ }^{\dagger}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | \% (95\% CI) ${ }^{\text {8 }}$ | \% (95\% CI) | \% (95\% CI) | \% (95\% CI) | \% (95\% CI) |
| United States Overall | 45.7 (44.3-47.1) | 50.6 (49.3-52.0) | 56.1 (54.9-57.4) | 60.4 (59.2-61.6) | 5.0 (4.3-5.6) |
| Region I | 56.5 (53.2-59.7) | 60.8 (57.4-64.1) | 69.3 (65.9-72.5) | 69.9 (66.7-72.9) | 4.8 (0.4-9.2) |
| Connecticut | 54.1 (47.5-60.5) | 56.7 (50.3-62.9) | 68.0 (62.1-73.4) | 62.2 (55.8-68.2) | 3.6 (-6.9-14.1) |
| Maine | 51.0 (44.8-57.1) | 59.8 (53.5-65.8) | 65.9 (59.9-71.4) | 70.0 (63.9-75.4) | 6.3 (3.1-9.5) |
| Massachusetts | 57.4 (51.5-63.2) | 61.5 (55.3-67.4) | 68.1 (61.6-74.0) | 71.4 (65.7-76.5) | 4.8 (3.1-6.5) |
| New Hampshire | 54.3 (48.2-60.3) | 63.3 (57.8-68.5) | 71.9 (65.7-77.4) | 69.9 (63.7-75.5) | 5.5 (-2.7-13.6) |
| Rhode Island | 72.9 (66.6-78.3) | 72.4 (66.7-77.4) | 84.2 (79.9-87.7) | 88.9 (84.7-92.1) | 6.2 (0.0-12.4) |
| Vermont | 50.5 (44.0-56.9) | 56.8 (50.2-63.1) | 67.4 (61.6-72.6) | 70.3 (64.6-75.5) | 6.9 (2.3-11.5) |
| Region II | 46.3 (42.6-50.1) | 50.1 (46.0-54.1) | 60.8 (57.1-64.3) | 67.2 (63.8-70.5) | 7.3 (3.8-10.8) |
| New Jersey | 39.0 (32.5-45.8) | 41.6 (34.9-48.6) | 59.7 (53.5-65.6) | 58.5 (52.4-64.3) | 7.6 (-3.5-18.6) |
| New York | 49.9 (45.4-54.4) | 54.2 (49.2-59.2) | 61.3 (56.8-65.6) | 71.5 (67.3-75.4) | 7.2 (3.4-11.1) |
| NY-City of New York | 55.1 (48.3-61.7) | 57.3 (50.1-64.1) | 68.9 (62.9-74.3) | 76.8 (70.8-81.9) | 7.7 (2.7-12.7) |
| NY-Rest of State | 46.6 (40.7-52.7) | 52.3 (45.4-59.1) | 56.4 (50.1-62.4) | 68.1 (62.3-73.5) | 6.9 (2.1-11.8) |
| Region III | 45.6 (41.9-49.3) | 53.3 (49.8-56.7) | 57.0 (53.5-60.3) | 61.2 (57.9-64.4) | 5.0 (2.3-7.7) |
| Delaware | 52.6 (46.3-58.9) | 61.0 (54.2-67.4) | 65.2 (59.4-70.7) | 70.7 (64.9-75.8) | 5.8 (3.5-8.2) |
| Dist. of Columbia | 61.7 (51.1-71.3) | 71.7 (64.6-77.8) | 74.7 (68.9-79.8) | 79.2 (73.5-84.0) | 4.9 (0.7-9.1) |
| Maryland | 42.0 (34.5-49.8) | 52.3 (45.3-59.1) | 60.3 (53.7-66.7) | 64.5 (58.1-70.5) | 7.4 (3.1-11.6) |
| Pennsylvania | 51.6 (46.0-57.2) | 56.9 (51.2-62.3) | 59.0 (53.7-64.1) | 64.4 (59.3-69.2) | 4.1 (2.1-6.0) |
| PA-Philadelphia | 67.2 (60.5-73.2) | 71.5 (64.9-77.3) | 79.4 (74.0-83.9) | 80.7 (75.4-85.0) | 4.7 (0.6-8.8) |
| PA-Rest of State | 49.6 (43.4-55.9) | 55.0 (48.7-61.1) | 56.3 (50.4-62.0) | 62.3 (56.6-67.6) | 4.0 (1.3-6.7) |
| Virginia | 38.8 (30.8-47.6) | 47.5 (40.1-55.1) | 50.4 (42.5-58.3) | 53.6 (46.0-61.0) | 4.6 (0.4-8.8) |
| West Virginia | 39.4 (33.3-45.8) | 50.2 (43.7-56.6) | 53.5 (47.4-59.5) | 54.2 (47.5-60.8) | 4.9 (-2.2-12.0) |
| Region IV | 40.4 (37.6-43.3) | 47.3 (44.5-50.1) | 51.4 (48.6-54.1) | 55.8 (53.1-58.5) | 5.0 (3.1-6.9) |
| Alabama | 36.2 (30.3-42.5) | 40.9 (35.0-47.1) | 48.4 (42.1-54.7) | 51.7 (45.3-58.0) | 5.4 (3.1-7.7) |
| Florida | 38.5 (31.9-45.5) | 48.9 (41.7-56.2) | 53.7 (46.7-60.6) | 55.9 (49.2-62.5) | 5.7 (0.2-11.2) |
| Georgia | 46.9 (39.2-54.8) | 53.0 (46.3-59.6) | 52.6 (46.3-58.9) | 67.3 (60.9-73.2) | 6.3 (-3.2-15.9) |


| Kentucky | 32.9 (26.8-39.6) | 37.6 (31.3-44.3) |
| :---: | :---: | :---: |
| Mississippi | 32.9 (26.7-39.7) | 35.9 (29.9-42.4) |
| North Carolina | 46.0 (39.4-52.7) | 57.9 (51.5-64.0) |
| South Carolina | 40.9 (33.8-48.3) | 40.5 (34.2-47.2) |
| Tennessee | 38.6 (32.5-45.2) | 38.9 (32.6-45.6) |
| Region V | 42.5 (39.9-45.2) | 50.5 (48.0-53.1) |
| Illinois | 43.8 (38.5-49.3) | 54.3 (49.5-59.0) |
| IL-City of Chicago | 55.9 (47.2-64.2) | 71.4 (64.5-77.5) |
| IL-Rest of State | 41.0 (34.8-47.5) | 50.4 (44.8-56.0) |
| Indiana | 35.8 (30.4-41.6) | 41.9 (35.8-48.3) |
| Michigan | 47.6 (41.1-54.2) | 48.7 (42.0-55.4) |
| Minnesota | 40.2 (34.2-46.5) | 55.2 (48.2-62.1) |
| Ohio | 40.4 (34.2-46.9) | 48.6 (42.5-54.8) |
| Wisconsin | 45.2 (38.8-51.8) | 55.0 (48.2-61.6) |
| Region VI | 44.4 (40.8-48.0) | 45.4 (42.0-48.9) |
| Arkansas | 30.7 (24.9-37.1) | 44.7 (38.4-51.1) |
| Louisiana | 43.1 (36.5-49.8) | 48.9 (42.3-55.5) |
| New Mexico | 49.0 (42.8-55.2) | 50.7 (44.3-57.2) |
| Oklahoma | 49.9 (44.2-55.6) | 54.0 (47.6-60.3) |
| Texas | 44.9 (39.9-50.0) | 43.5 (38.7-48.3) |
| TX-Bexar County | 43.9 (37.6-50.5) | 41.7 (35.4-48.3) |
| TX-City of Houston | 50.9 (43.3-58.4) | 60.1 (53.1-66.7) |
| TX-Dallas County | NA | NA |
| TX-El Paso County | NA | 62.6 (55.1-69.6) |
| TX-Rest of State | 44.5 (38.8-50.4) | 41.4 (35.9-47.1) |
| Region VII | 37.5 (34.0-41.3) | 40.2 (36.7-43.8) |
| lowa | 43.3 (37.3-49.5) | 44.5 (37.8-51.4) |
| Kansas | 32.3 (26.1-39.2) | 35.5 (29.4-42.1) |
| Missouri | 33.0 (26.6-40.1) | 37.5 (31.3-44.1) |
| Nebraska | 51.3 (44.9-57.8) | 49.3 (42.7-55.9) |
| Region VIII | 38.1 (34.7-41.6) | 47.4 (44.1-50.8) |
| Colorado | 45.5 (39.4-51.8) | 51.4 (45.3-57.3) |
| Montana | 34.4 (28.4-40.9) | 44.9 (38.4-51.5) |
| North Dakota | 46.6 (40.0-53.2) | 49.0 (42.3-55.7) |
| South Dakota | 38.6 (32.3-45.2) | 47.3 (40.7-54.0) |
| Utah | 27.2 (21.6-33.5) | 43.4 (37.4-49.6) |

45.8 (39.7-52.0) 45.5 (39.5-51.5) 56.7 (50.5-62.7) 44.2 (38.1-50.5) 48.7 (42.3-55.1)
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7.9 (62.7-72.6) 48.6 (44.1-53.0)
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54.8 (51.4-58.2) 64.2 (58.2-69.9) 50.4 (44.6-56.2) 66.3 (60.0-72.1) 46.0 (39.8-52.3) 44.2 (38.0-50.7)
48.0 (41.7-54.4) 45.6 (39.4-52.0) 57.5 (51.0-63.8) 44.2 (37.4-51.3) 55.3 (48.5-61.9)
58.4 (55.8-61.0) 63.5 (58.6-68.1) 73.1 (63.2-81.2) 61.4 (55.8-66.6) 45.2 (38.9-51.7) 61.3 (54.2-67.9) 59.1 (53.0-65.0) 56.2 (49.5-62.8) 61.9 (55.5-67.9)
52.0 (49.3-54.8) 54.4 (48.1-60.5) 60.5 (54.4-66.3) 60.5 (54.4-66.3) 56.9 (49.5-63.9) 49.3 (45.6-53.0) 53.4 (46.7-59.9) 62.6 (53.6-70.9) 45.7 (38.5-53.1) 79.8 (73.6-84.9) 46.8 (42.0-51.6)
55.3 (51.8-58.8) 60.7 (54.8-66.3) 51.8 (45.2-58.3) 51.6 (45.0-58.1) 63.7 (57.2-69.8)
57.4 (53.6-61.0) 63.5 (56.5-69.9) 55.3 (48.9-61.5) 67.6 (60.9-73.5) 55.9 (49.2-62.3) 49.7 (43.1-56.2)
5.4 (1.9-8.8) 4.8 (-0.7-10.3) 3.2 (-5.8-12.2)
1.4 (-1.2-4.0) 5.9 (0.1-11.8)
5.2 (2.1-8.2) 5.6 (-2.1-13.4) 4.5 (-8.0-17.0) $6.0(-2.0-13.9)$ 3.6 (-3.1-10.3) 5.3 (-0.9-11.5) 6.3 (-5.0-17.6)
5.1 (1.7-8.5)
4.8 (-1.8-11.5)
2.9 (-1.3-7.1)
8.1 (-1.0-17.1)
5.8 (5.7-5.9)
4.4 (-1.1-10.0)
2.3 (0.3-4.4)
2.0 (-3.4-7.5)
3.5 (-2.4-9.4)
3.9 (-3.0-10.8)
$(--)^{\pi}$
(.-.) ${ }^{\pi}$
1.5 (-4.6-7.6)
6.5 (0.9-12.2) 6.4 (0.4-12.4) 6.6 (2.7-10.5) 7.0 (-0.9-14.8) 4.9 (-2.4-12.2)
6.6 (1.9-11.4) 6.9 (-1.2-15.0) 6.9 (2.9-10.8) 8.0 (-1.5-17.6) 5.0 (-1.5-11.6) 7.0 (-2.8-16.7)

| Wyoming | 34.9 (29.1-41.1) | 39.5 (34.1-45.1) | 42.2 (35.8-48.9) | 43.4 (37.5-49.5) | 2.8 (0.5-5.1) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Region IX | 57.1 (51.6-62.5) | 58.2 (52.8-63.4) | 62.0 (56.4-67.2) | 70.6 (65.6-75.2) | 4.6 (-0.5-9.6) |
| Arizona | 54.1 (47.7-60.3) | 49.3 (43.0-55.6) | 59.7 (53.9-65.1) | 63.1 (56.6-69.2) | 3.8 (-5.0-12.5) |
| California | 59.0 (52.1-65.6) | 60.5 (53.6-67.0) | 62.5 (55.4-69.1) | 72.6 (66.1-78.2) | 4.5 (-1.7-10.6) |
| Hawaii | 46.0 (39.3-52.8) | 58.4 (52.2-64.3) | 66.8 (60.9-72.2) | 64.8 (58.3-70.8) | 6.4 (-4.1-16.9) |
| Nevada | 42.6 (36.3-49.1) | 48.7 (42.5-54.9) | 57.9 (51.5-64.1) | 64.9 (58.5-70.8) | 7.6 (5.9-9.3) |
| Region X | 46.1 (42.1-50.2) | 54.1 (50.2-58.0) | 57.2 (53.6-60.8) | 62.6 (58.8-66.3) | 5.2 (2.4-8.0) |
| Alaska | 39.5 (33.4-46.0) | 43.1 (37.1-49.4) | 49.1 (42.9-55.2) | 61.1 (55.0-66.9) | 7.1 (1.3-13.0) |
| Idaho | 44.4 (37.2-51.9) | 45.3 (38.6-52.3) | 50.6 (44.2-56.9) | 57.2 (50.9-63.3) | 4.5 (0.6-8.5) |
| Oregon | 50.7 (44.7-56.7) | 50.5 (44.1-56.8) | 64.1 (58.1-69.8) | 61.7 (55.2-67.9) | 4.7 (-4.6-14.0) |
| Washington | 44.8 (38.3-51.5) | 59.6 (53.2-65.7) | 56.1 (50.2-61.8) | 64.8 (58.5-70.6) | 5.5 (-4.8-15.8) |
| Range | (27.2-72.9) | (35.5-72.4) | (42.2-84.2) | (43.4-88.9) | (1.4-8.1) |
| Territory |  |  |  |  |  |
| Guam | 45.4 (39.3-51.6) | NA | 60.2 (54.5-65.7) | 67.4 (62.4-72.1) | 7.3 (6.7-8.0) |
| Puerto Rico | NA | 64.9 (56.0-72.9) | 72.6 (66.3-78.0) | 75.8 (70.2-80.6) | (.-.) ${ }^{\text {T}}$ |
| U.S. Virgin Islands | 24.6 (19.6-30.4) | NA | 37.9 (32.8-43.2) | 41.9 (36.2-47.7) | 5.9 (-2.6-14.5) |

Abbreviations: CI = confidence interval; HHS = U.S. Department of Health and Human Services; HPV = human papillomavirus; NA = not available (Data was not collected for that survey year).

* HPV vaccine, nine-valent (9vHPV), quadrivalent (4vHPV), or bivalent (2vHPV) in females and males combined
${ }^{\dagger}$ The "Most Current 4 Years Annual Average Increase" was computed by using weighted linear regression for each awardee, with weights inverse proportional to the estimated variance of each estimate. Confidence intervals which did not include zero were considered statistically significant
${ }^{\delta} 95 \%$ confidence intervals were computed using the Wald test. Estimates with $95 \%$ CI half-widths $>10$ might not be reliable.
${ }^{\pi}$ Estimates for jurisdictions have been suppressed if data for either 2013 or 2016 are not available or if data are available for fewer than three of the four years

